

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
7 April 2005 (07.04.2005)

PCT

(10) International Publication Number  
**WO 2005/031875 A1**

- (51) International Patent Classification<sup>7</sup>: **H01L 27/148**, 23/00 (74) Agent: PARK, Jang-Won; Jewoo Bldg. 5th Floor, 200, Nonhyun-Dong, Gangnam-Gu, Seoul 135-010 (KR).
- (21) International Application Number: PCT/KR2004/002507 (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 30 September 2004 (30.09.2004)
- (25) Filing Language: Korean
- (26) Publication Language: English
- (30) Priority Data: 10-2003-0068283 1 October 2003 (01.10.2003) KR (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (71) Applicant (*for all designated States except US*): NEPES CO., LTD. [KR/KR]; 74-10, Yongsung-Ri, Samsung-Myun, Eumsung-Gun, Chungcheongbuk-Do 369-834 (KR).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): KIM, Jong-Heon [KR/KR]; Daewon Apt. 101-1107, Kakyung-Dong, Hungduk-Ku, Cheongju, Choongcheongbuk-Do 361-739 (KR). SONG, Chi-Jung [KR/KR]; Mugoongwha Apt. 103-307, Wolpyung-Dong, Seo-Ku, Daejeon 302-747 (KR).
- Published:  
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: STRUCTURE OF PACKAGE FOR SEMICONDUCTOR IMAGE PICKUP DEVICE AND FABRICATION METHOD THEREOF

(57) Abstract: A package for semiconductor image pickup device is provided. The package is fabricated by using flip chip bumping. During deposition process of forming a metallic bonding layer and a metal layer for plating, a surface of a semiconductor image pickup device is maintained at the range between room temperature and 200 °C in accordance with a first embodiment. A polymer layer for preventing stress from generating can absorb stress generated during the deposition process in accordance with a second embodiment. According to the present invention, a functional polymer layer on the surface of a semiconductor image pickup device can be prevent from being deteriorated in its properties and from transforming at its surface.



WO 2005/031875 A1